

ABSTRACT OF THE DISCLOSURE

A method of producing a positive electrode active material for a non-aqueous electrolyte secondary battery, comprising the steps of: (a) preparing a raw material mixture, comprising " $nx$ " mol of magnesium, " $ny$ " mol of an element M where the element M is at least one selected from the group consisting of Al, Ti, Sr, Mn, Ni and Ca, " $n(1-x-y)$ " mol of cobalt and " $nz$ " mol of lithium, such that the values  $n$ ,  $x$ ,  $y$  and  $z$  satisfy  $0 < n$ ,  $0.97 \leq (1/z) \leq 1$ ,  $0.005 \leq x \leq 0.1$ , and  $0.001 \leq y \leq 0.03$ ; and (b) baking the raw material mixture in an oxidization atmosphere at 1000 to 1100 °C.